



# Real Things You Can Do About Climate Change

*Jeff McMahon • Skokie Public Library*

*July 25, 2017*

16 of the hottest years on record have occurred since 2000—17 years ago

## TEN HOTTEST YEARS

All Since 1998

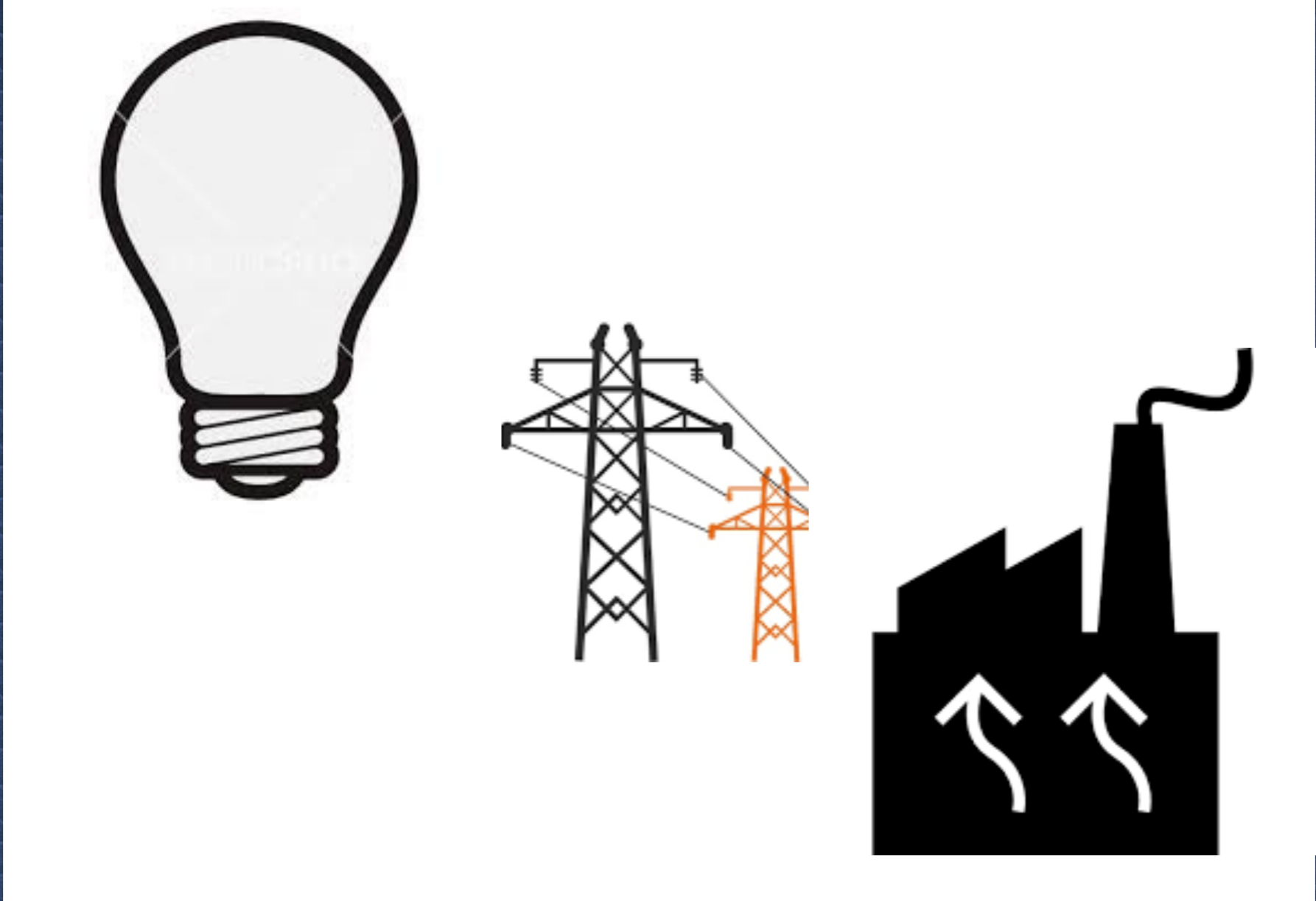


2003 and 2006 (not shown) tied with 2007. Columns represent difference from 20th century average.  
Data as of January 18, 2017. Subject to change based on NCEI revisions.  
Source: NOAA/NCEI

CLIMATE  CENTRAL

# individual vs. collective action





# Upgrade Light Bulbs

*incandescents*

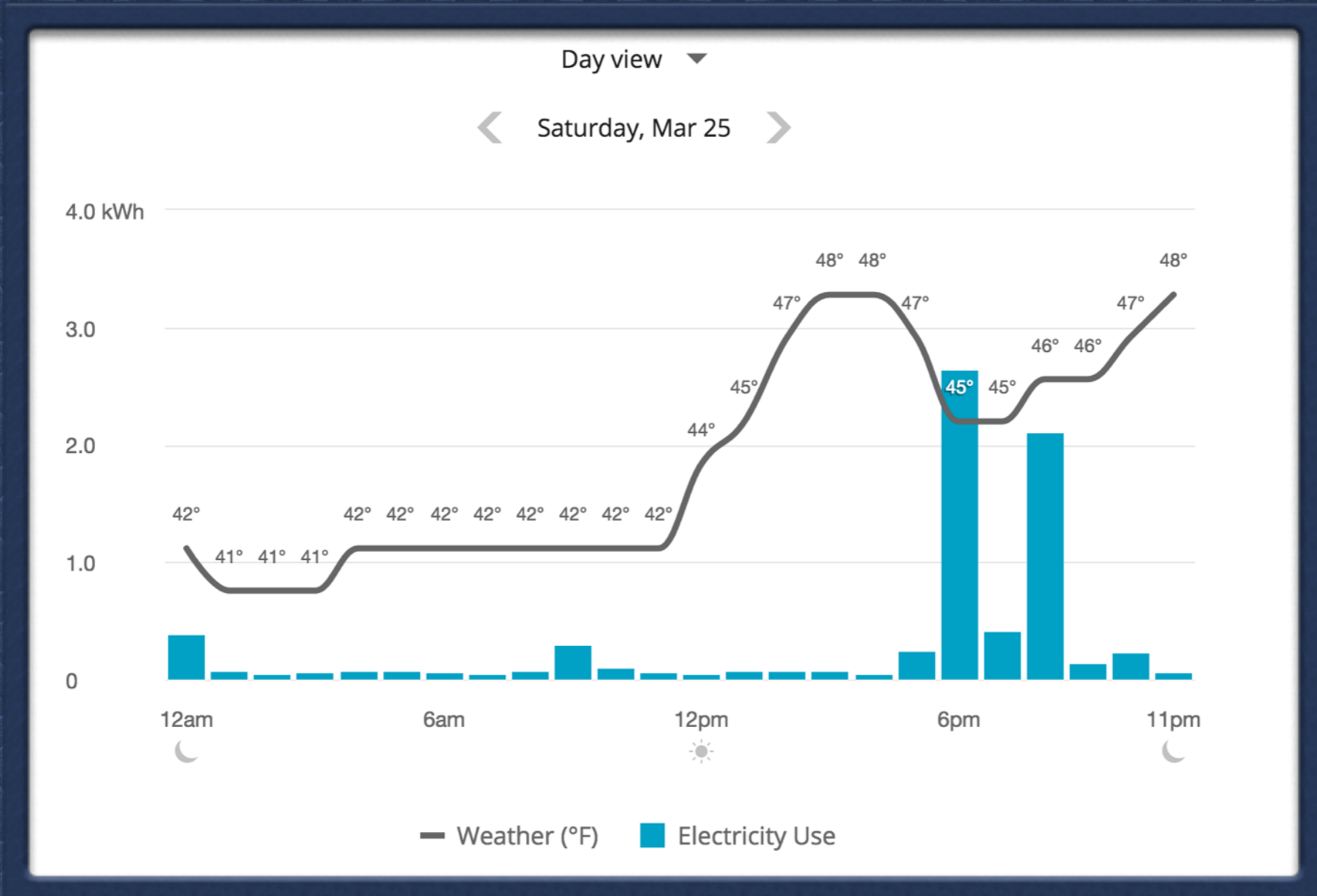


	60W Traditional Incandescent	43W Energy-Saving Incandescent	15W CFL		12W LED	
			60W Traditional	43W Halogen	60W Traditional	43W Halogen
<b>Energy \$ Saved (%)</b>	-	~25%	~75%	~65%	~75%-80%	~72%
<b>Annual Energy Cost*</b>	\$4.80	\$3.50	\$1.20		\$1.00	
<b>Bulb Life</b>	1000 hours	1000 to 3000 hours	10,000 hours		25,000 hours	

*\*Based on 2 hrs/day of usage, an electricity rate of 11 cents per kilowatt-hour, shown in U.S. dollars  
 Source: <https://energy.gov/energysaver/how-energy-efficient-light-bulbs-compare-traditional-incandescents>*



Dryer vs. Clothesline

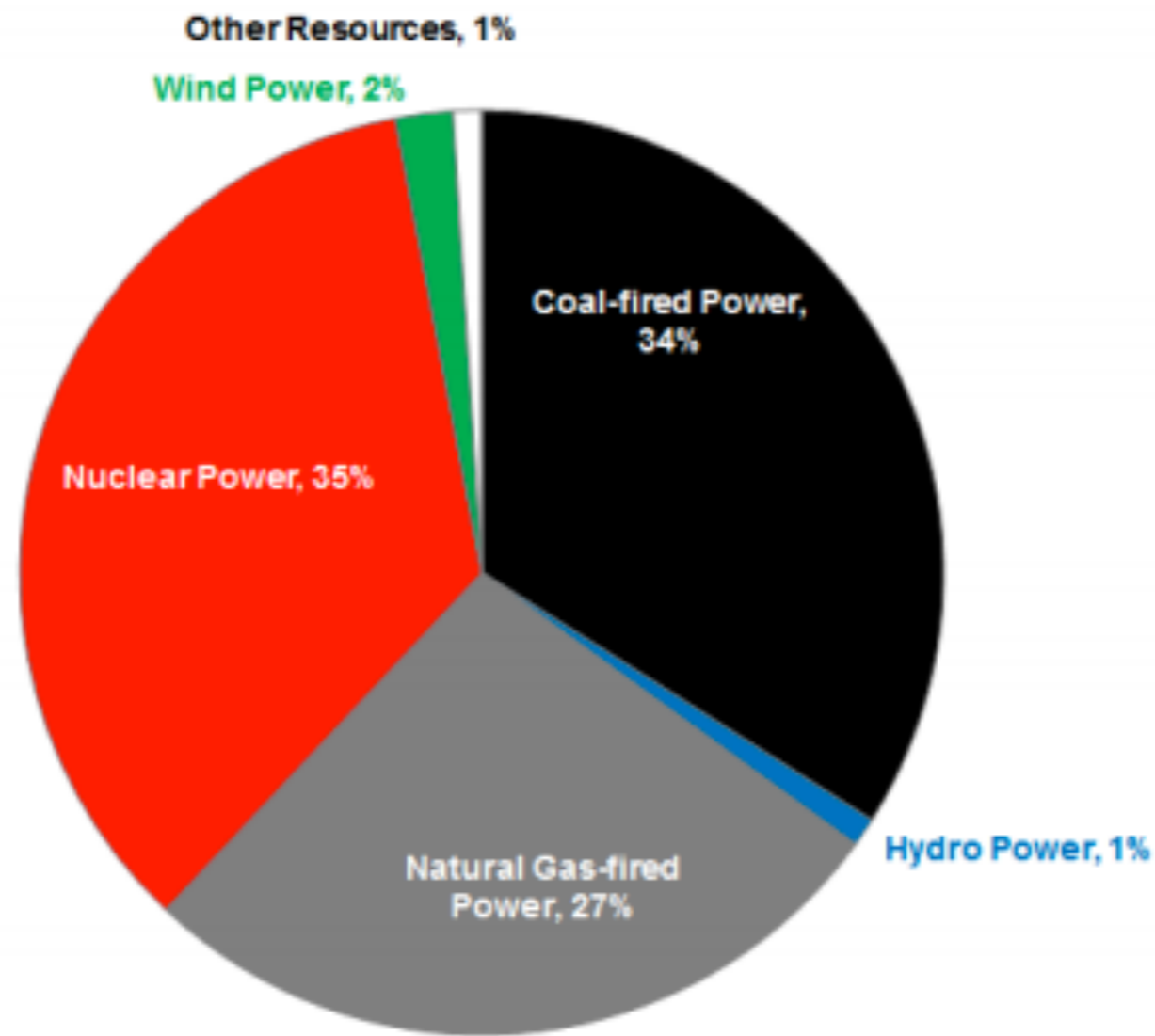


Effect of my electric dryer on one day's electricity use





SOURCES OF ELECTRICITY FOR THE 12 MONTHS ENDING December 31, 2016



This is why electricity matters so much

Comed Environmental Disclosure 2017



Green  
Mountain  
Energy®



CleanChoice  
ENERGY™

NATIONAL  
GAS & ELECTRIC



VIEW  
OFFERS >>



CHAMPION  
ENERGY, LLC™

Click here ▶

# Buy Green Energy

<https://www.pluginillinois.org/offersbegin.aspx>



# Install Green Energy

<https://www.illinoissolar.org/>



Save Air Conditioning for Emergencies



Recycle, But Reduce  
and Reuse First

# Animal Agriculture



*Food and Agriculture Organization  
of the United Nations (FAO):*

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Total emissions from global livestock:  
7.1 Gigatonnes of Co<sub>2</sub>-equiv per year, representing  
**14.5 percent** of all anthropogenic GHG emissions.

<http://www.fao.org/news/story/en/item/197623/icode/>

# Animal Agriculture



*WorldWatch Institute:*

An audit of the US estimates by Robert Goodland and Jeff Anhang, researchers for the World Bank Group, found that livestock and their byproducts actually account for at least 32.6 billion tons of carbon dioxide per year, or 51 percent of annual worldwide GHG emissions.

<http://www.worldwatch.org/node/6294>



# A Plant-Based Diet





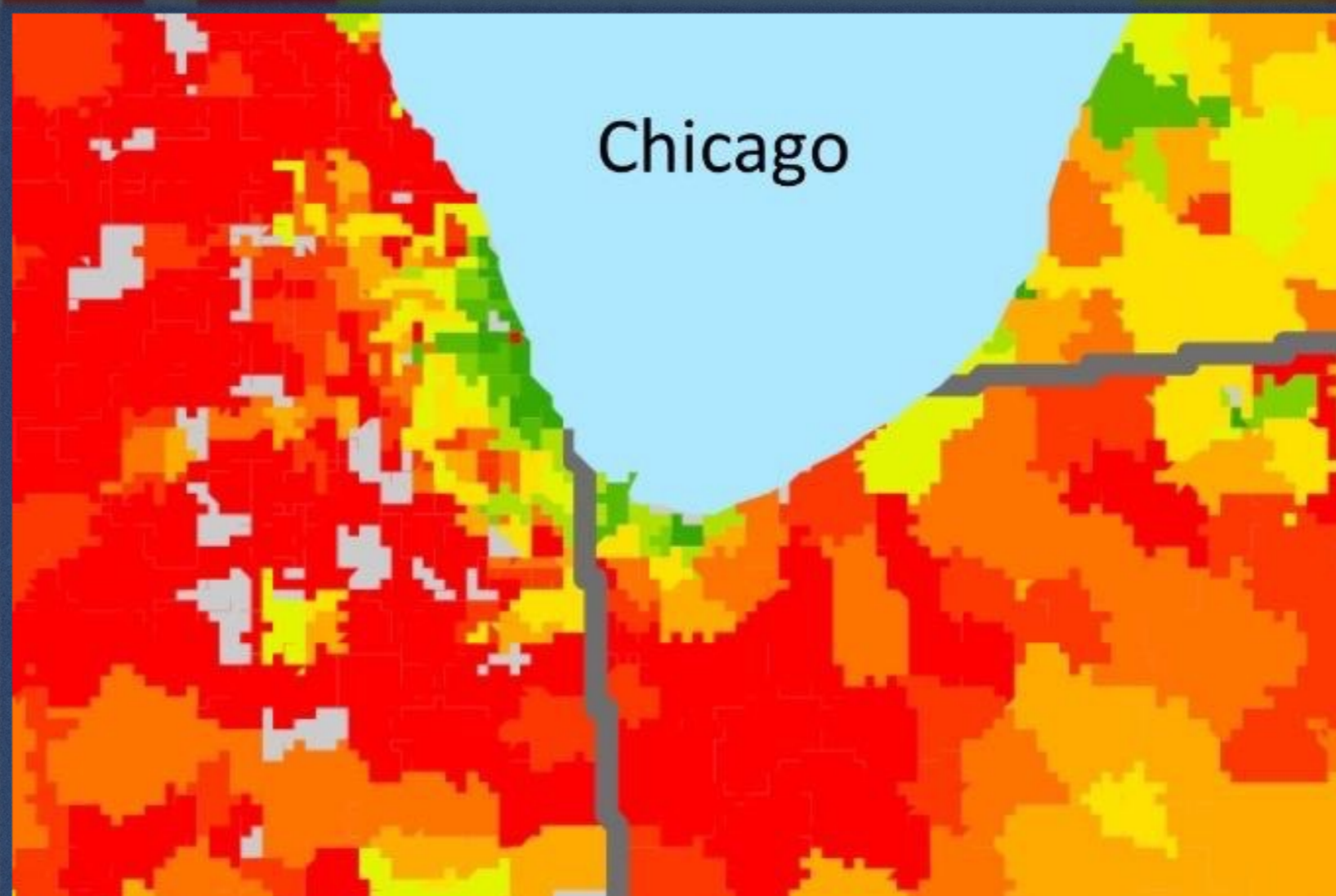
# Reduce Automobile Emissions

*hybrids • electric vehicles*



# Live Car Free

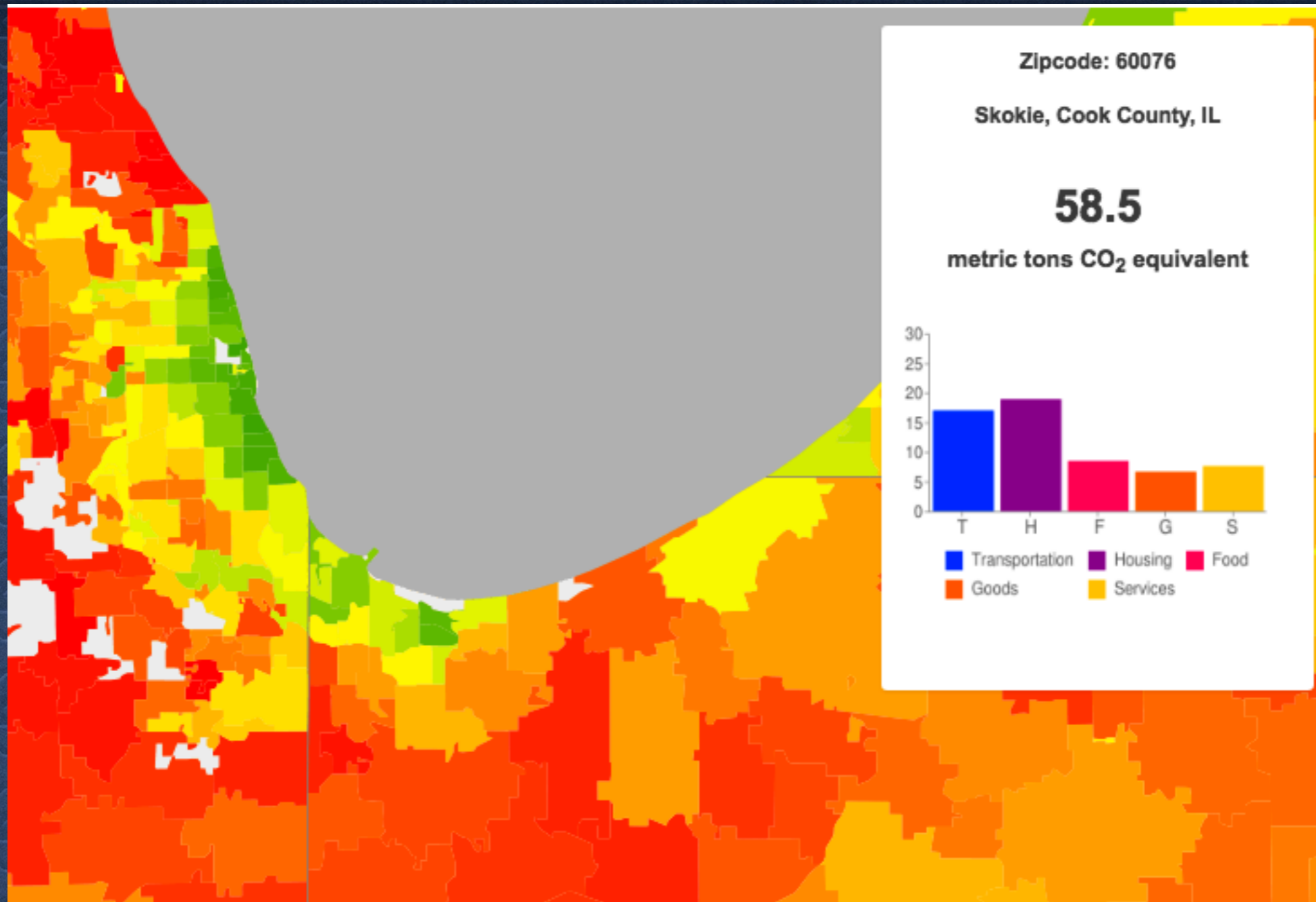
*Trains • Buses • Bicycles • Rideshare*



# Compact Urban Design

*Kammen & Jones (2014) UC Berkeley, Environmental Science and Technology*

*<http://vcresearch.berkeley.edu/news/suburban-sprawl-cancels-carbon-footprint-savings-dense-urban-cores>*



# Skokie's Carbon Profile

<http://coolclimate.berkeley.edu/maps>



# Airline Emissions

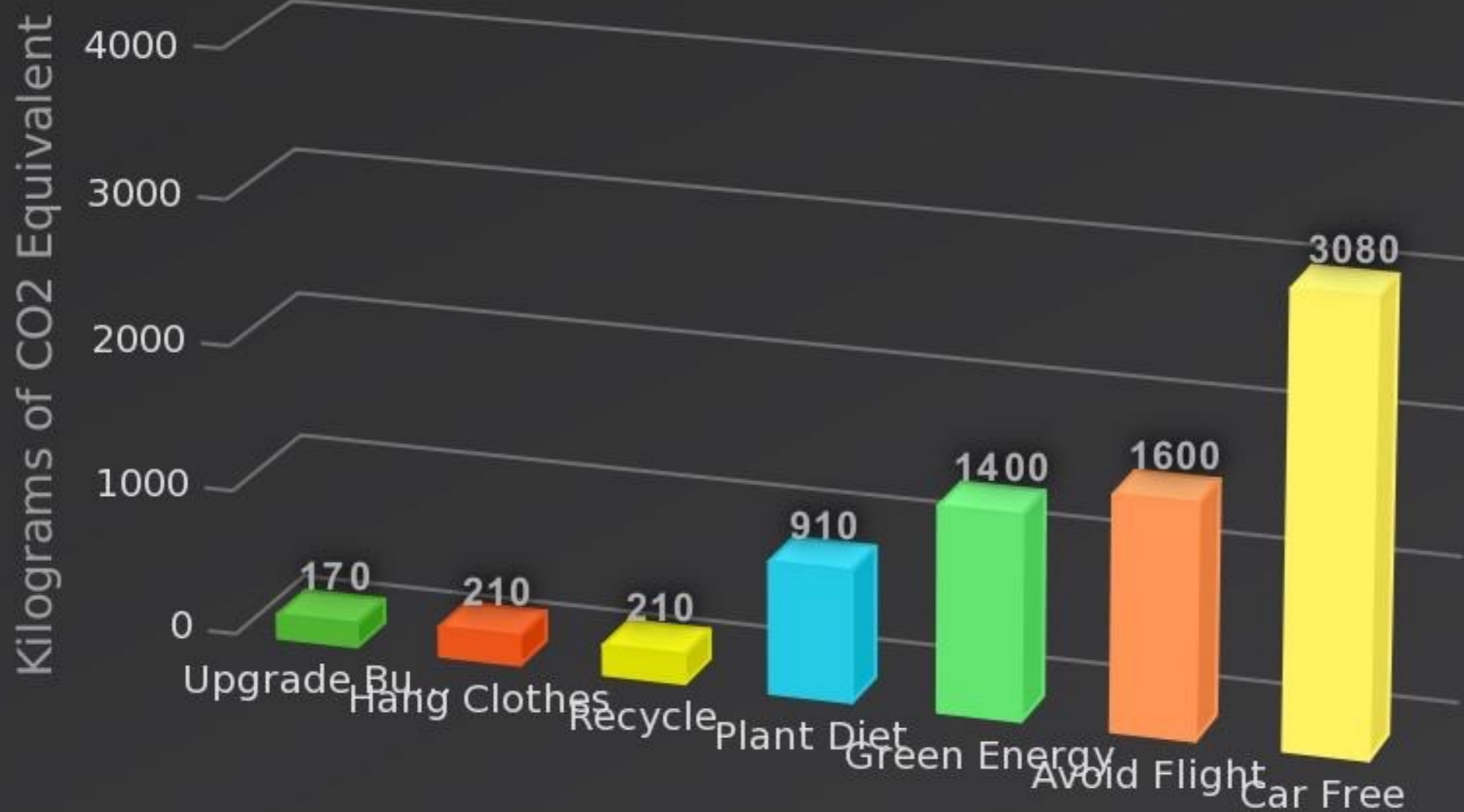
<https://www.icao.int/environmental-protection/CarbonOffset/Pages/default.aspx>

# What Are The Most Effective Actions You Can Take?

- ✿ *Upgrade Lightbulbs*
- ✿ *Hang Dry Clothes*
- ✿ *Recycle*
- ✿ *Switch to a Plant-Based Diet*
- ✿ *Live Car Free*
- ✿ *Buy Green Energy*
- ✿ *Avoid Transatlantic Flights*

# MOST EFFECTIVE INDIVIDUAL ACTIONS (U.S.)

WYNES & NICHOLAS



■ Most Effective Actions



**This is the size of  
ONE TONNE CO<sub>2</sub>**

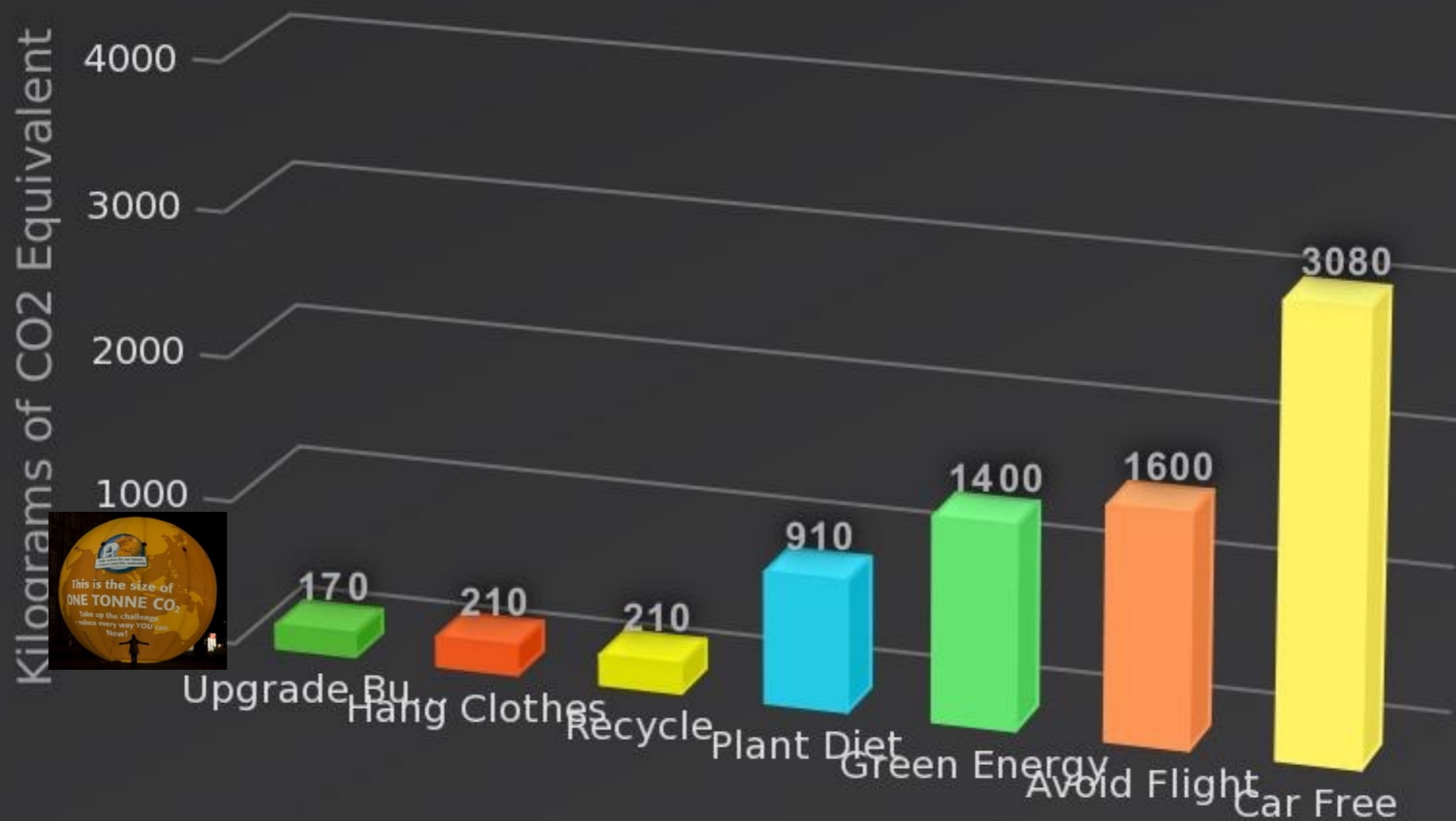
**Take up the challenge  
– reduce every way YOU can.  
Now!**





# MOST EFFECTIVE INDIVIDUAL ACTIONS (U.S.)

WYNES & NICHOLAS



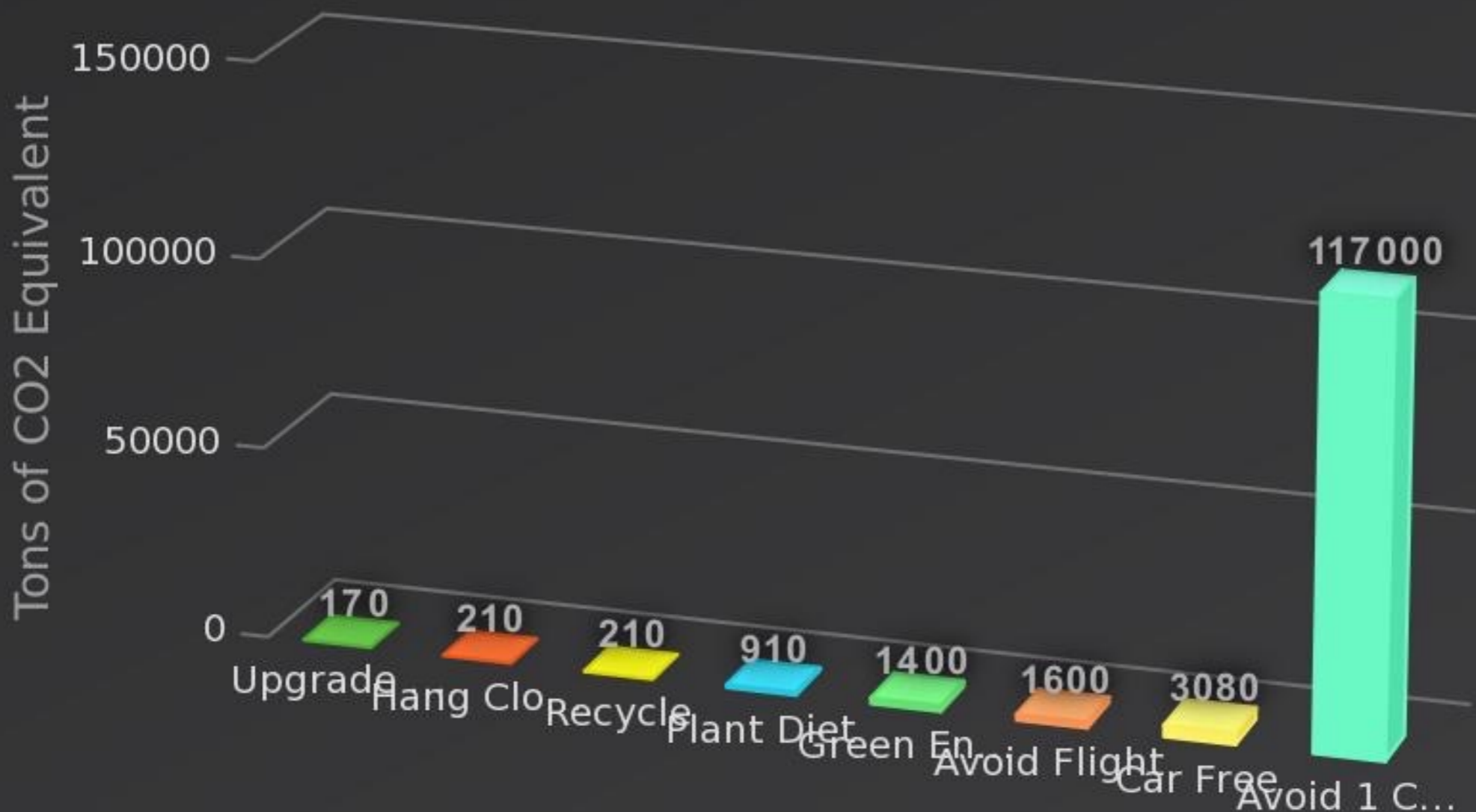
■ Most Effective Actions

There's One More

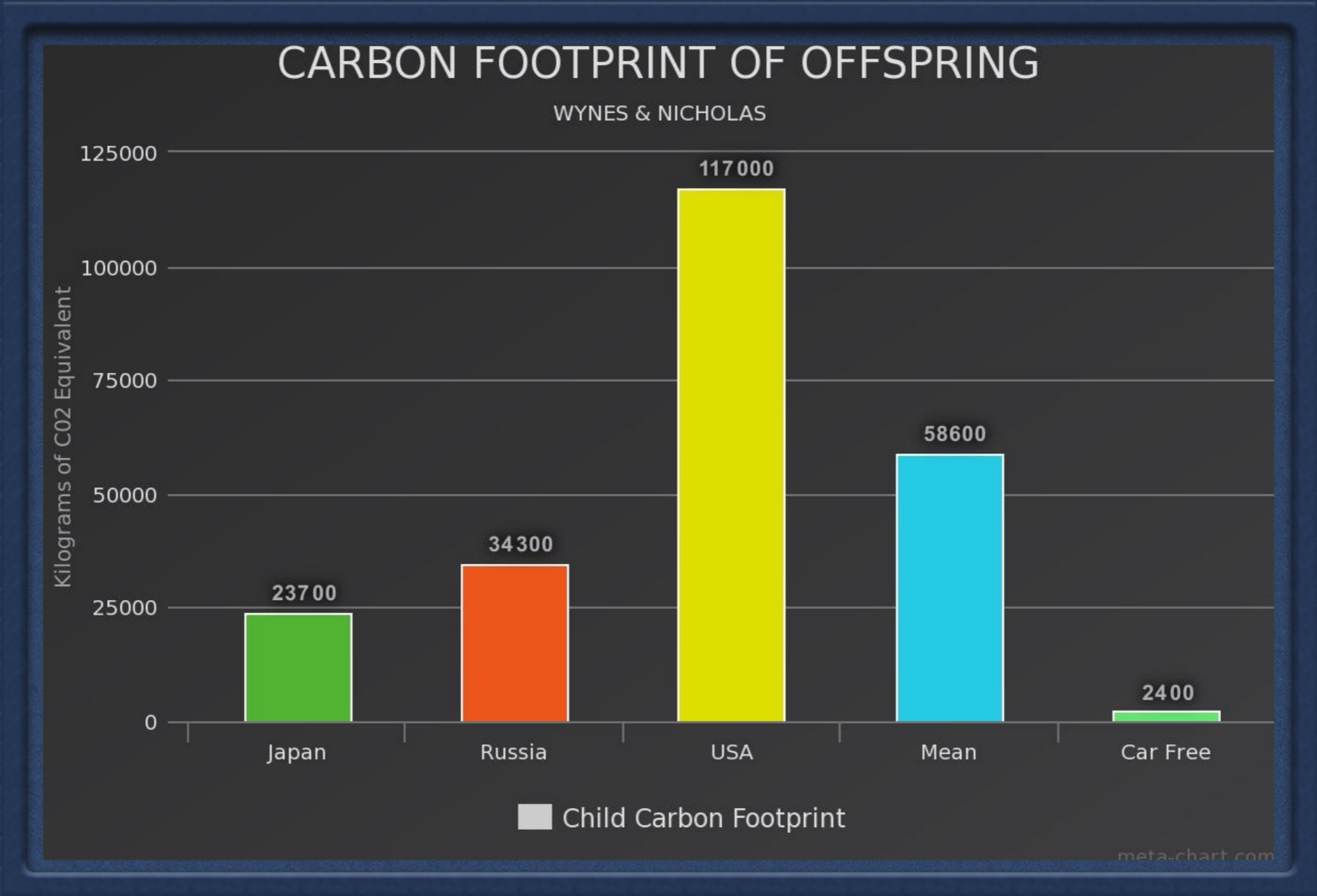
*And it's a big one.*

# MOST EFFECTIVE INDIVIDUAL ACTIONS (U.S.)

WYNES & NICHOLAS



■ Most Effective Actions



# Carbon Footprint of Offspring

*Wynes & Nicholas, Environmental Research Letters 2017*

# Four Scientist-Recommended Actions

*Seth Wynes of Sweden's Lund University and Kimberly Nicholas of the University of British Columbia, in an article published in the journal Environmental Research Letters.*

- ✿ *Have One Less Child*
- ✿ *Live Car Free*
- ✿ *Avoid Airline Flights*
- ✿ *Eat a Plant-Based Diet*

# Offset Unavoidable Emissions

- ✿ Airline flights: <https://www.icao.int/environmental-protection/CarbonOffset/Pages/default.aspx>
- ✿ Everything else: [ClimateNeutralNow.org](http://ClimateNeutralNow.org)
- ✿ Calculator: <http://climateneutralnow.org/Pages/calculator.aspx>
- ✿ Projects: <https://offset.climateneutralnow.org/>